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## The impact of a multifaceted intervention to reduce potentially inappropriate prescribing among discharged older adults: A before-and-after study (Article) [\(Open Access\)](#)

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### Abstract

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Background: Potentially inappropriate prescribing (PIP) is associated with the incidence of adverse drug reactions, drug-related hospitalization and other negative outcomes in older adults. After hospitalization, older adults might be discharged with several types of PIPs. Studies have found that the lack of healthcare professionals' (HCPs) knowledge regarding PIP is one of the major contributing factors in this issue. The purpose of this study is to investigate the impact of a multifaceted intervention on physicians' and clinical pharmacists' behavior regarding potentially inappropriate medication (PIM) and potential prescribing omission (PPO) among hospitalized older adults. Methods: This is a before-and-after study that took place in a tertiary Malaysian hospital. Discharge medications of patients ≥65 years old were reviewed to identify PIMs/PPOs using version 2 of the STOPP/START criteria. The prevalence and pattern of PIM/PPO before and after the intervention were compared. The intervention targeted the physicians and clinical pharmacists and it consisted of academic detailing and a newly developed smartphone application (app). Results: The study involved 240 patients before (control group) and 240 patients after the intervention. The prevalence of PIM was 22% and 27% before and after the intervention, respectively ( $P = 0.213$ ). The prevalence of PPO in the intervention group was significantly lower than that in the control group (42% Vs. 53.3%);  $P = 0.014$ . This difference remained statistically significant after controlling for other variables ( $P = 0.015$ ). The intervention was effective in reducing the two most common PPOs; the omission of vitamin D supplements in patients with a history of falls ( $P = 0.001$ ) and the omission of angiotensin converting enzyme inhibitor in patients with coronary artery disease ( $P = 0.03$ ). Conclusions: The smartphone app coupled with academic detailing was effective in reducing the prevalence of PPO at discharge. However, it did not significantly affect the prevalence or pattern of PIM. © 2020 The Author(s).

### SciVal Topic Prominence ⓘ

Topic: Potentially Inappropriate Medication List | Deprescriptions | Inappropriate Prescribing

Prominence percentile: 99.232 ⓘ

### Author keywords

- Academic detailing
- Older adults
- Potential prescribing omission
- Potentially inappropriate medication
- Smartphone app

### Indexed keywords

EMTREE drug terms: dipeptidyl carboxypeptidase inhibitor vitamin D

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